**Grant Lab: Coastal Pollution**

**Nearshore:** Where water quality monitoring and most recreation occurs. FIB from dry & wet weather runoff, shallow groundwater, bather shedding, bird droppings, growth in intertidal sediments & vegetation, and exchange with the Bay.

**Bay:** FIB from large point sources (sewage outfalls, creeks and rivers), non-point sources (vessel discharges and growth in subtidal sediments), and exchange with the beach boundary layer.
Beach boundary layer

\[ U(y)Z(y) \frac{\partial \bar{C}}{\partial x} = \frac{\partial}{\partial y} \left[ \varepsilon_y(y)Z(y) \frac{\partial \bar{C}}{\partial y} \right] \]

- along-shore advection
- cross-shore diffusion